

# **Research and monitoring activities and needs related to ABoVE and POLAR activities**

Ryan Danby, Associate Professor

Queen's University, Geography / Environmental Studies

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# Ongoing research and monitoring *Related to ABoVe and POLAR activities*

## **1. Ecological Investigations at Alpine Treeline**

- *Long-term study of treeline dynamics in SW Yukon*
- *Focus on causes of variation at local and landscape scales*
- *Methods include:*
  - *Manipulative experiments examining shrub-tree interactions*
  - *Dendrochronological investigations*
  - *Spatial analysis using multispectral space-borne imagery*
  - *Vegetation composition and environmental monitoring*

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## **2. Remote Sensing of Vegetation Dynamics**

- *Yukon-wide vegetation productivity analysis based on weekly AVHRR and MODIS imagery*
- *NWT multi-temporal Landsat transect (Great Slave Lake to Arctic Ocean, 1983-2013)*
- *Relationship between satellite-derived NDVI and tree ring indices to examine mechanisms of greening/browning (SW Yukon)*
- *Habitat change detection in SW Yukon using aerial photography and high resolution multispectral imagery (wetlands and water bodies, grasslands, forests)*

# Planned research and monitoring *Related to ABoVe and POLAR activities*

## **1. Disturbance Ecology of SW Yukon Forests**

- *Mapping and spatial analysis of spruce bark beetle disturbance based on multitemporal Landsat record*
- *Comparison of regeneration dynamics in differentially affected areas. Match to Landsat record.*

# Management related research & monitoring needs *Related to ABoVe and POLAR activities*

- *ABoVE: High resolution DEMs/DSMs for several targeted areas in SW Yukon would be useful for a number of different agencies and researchers; could also expand possible monitoring and research opportunities*

# Opportunities for ABoVE/POLAR for engagement, education, outreach

- *Please list any upcoming events, workshops, etc. where ABoVE/POLAR may be able share information and further develop collaborations in Yukon*

# Recommendations for ABoVE/POLAR for engagement, education, outreach

- *Please provide recommendations for ABoVE/POLAR on ways to effectively share information and develop collaborations in Yukon*